EXECUTIVE SUMMARY

Date Summary Prepared: October 5, 2011

Mine Name: Southwest #1	**I.D. Number:** M/047/0103
Operator: Red Leaf Resources, Inc.	**Date Original Notice Received:** April 28, 2011
Address: 200 West Civic Center Drive, Suite 190	**County:** Uintah
Sandy, Utah 84070	**New/Existing:** New large mine on the site of existing exploration and small mine projects
	Mineral Ownership: SITLA
Telephone: (801) 878-8100	**Surface Ownership:** SITLA and Fee
Contact Person: Dr. James Patten	**Lease No.(s):** SITLA Leases ML-50150 and 43374
Telephone: (801) 878-8100	**Permit Term**: Life of Mine

Life of Mine: Phase approached for 21 years until 2033. Future Mining Phases may extend the life of mine 10 years or more.

Legal Description: Sections 19 and 29, 30 Township 13 South, Range 23 East, SLBM; Sections 25 and 36, Township 13 South, Range 22 East, SLBM.

Mineral(s) to be Mined: Oil Shale

Acres to be Disturbed: 779

Present Land Use: Grazing and Wildlife Habitat

Postmining Land Use: Grazing and Wildlife Habitat

Variances from Reclamation Standards (Rule R647) Granted: None

SOILS AND GEOLOGY

Soil Description: Soil samples identified by USDA, NRCS indicate four soil types as Gompers 4-25% slope, Gompers 25-50% slope, Walknolls-Mikim, and Whitsage-Cedarknoll complex. Soil pH ranges from about 7.9 to 9.0, so most soils are alkaline. Soils are mostly derived from the local stratigraphy. The depths of the soils vary. After initial development, the phased approach to mining will allow direct haul of salvaged soil. Soils are mostly derived from the local stratigraphy. All available suitable surface soils for revegetation will be removed from undisturbed areas within the permit boundary.

Special Handling Problems: Depth of soil is variable from hilltops to sideslopes, and some soils will not be salvaged because of adverse chemical or physical characteristics.

Geology Description: The mine is in the Uinta Basin Section of the Colorado Plateau Geologic Province. The geomorphology of the site consists of rolling terrain dissected with intermittent stream channels. Intermittent stream channel Indian Ridge Canyon is south of the permit and drains to the

northeast to intermittent stream channel Sweetwater Canyon and then into intermittent stream channel Bitter Creek all northeast of the permit area. Intermittent stream channel Reservoir Canyon dissects Section 19 of the permit and then drains into Indian Canyon. The permit areas for the Southwest #1 small mine and exploration projects are in the Parachute Creek Member of the Eocene Green River formation. In the mine area, the beds strike west–northwest and dip 12 to 13 degrees to the north–northeast. The Green River formation consists of lenticular beds of lacustrine shales, calcareous marlstone, sandstone/mudstone, with a marker bed of volcanic tuff.

HYDROLOGY

Ground Water Description: Regional groundwater movement from the area is towards the north part of the Uintah basin. A water well was drilled by the operator at the site to a depth of 900 feet and operates at 15 gpm. Records of nearby water wells with the Utah Division of Water Rights indicate two deep isolated perched aquifers at a) in a 1312-foot-deep well feet at 9 gpm at 475 feet, and b) in a 1360-deep-well 17 gpm was produced. No static water level information was available. The ground water is not susceptible to the mining operation because it is isolated by several hundred of feet of low permeability marlstone.

Surface Water Description: The mine site and the immediate surrounding area are characterized by ephemeral stream channels, flowing only in response to snow melt and major rainfall events. Intermittent stream channel Indian Ridge Canyon is south of the permit area and drains to the northeast to intermittent stream channel Sweetwater Canyon and then into intermittent stream channel Bitter Creek all northeast of the permit area. Clean water diversions and sumps will be built to manage surface water runoff at the site during mining and prior to any construction activities. All diversions and ponds were appropriately sized to handle the contributing watersheds and storm events. The project is constructed below grade, keeping all disturbed area drainage from leaving the site. Best management practices and concurrent reclamation activities will be implemented during the life of the mine operations to ensure protection of surface water resources.

Water Monitoring Plan: An analytical water monitoring program is not required, but a visual monitoring program will be implemented.

ECOLOGY

Vegetation Type(s); Dominant Species: The study area consists of four plant communities: sagebrush-grass, Colorado Plateau pinyon-juniper woodland, barren outcrop, and greasewood-sagebrush. Vegetation cover over the entire area averages 43 percent.

The area contains habitat for Graham's penstemon, a species proposed for listing as threatened. The plan contains measures to be used to survey for this species in advance of operations, avoiding populations where possible, and applying reasonable mitigation measures identified by participants in a conservation agreement that has been signed for this species. Details of mitigation measures, if needed, have not yet been decided but will be determined by the Division and the operator in consultation with the Fish and Wildlife Service and other authorities.

Wildlife Concerns: No threatened or endangered species were identified on the property, but the greater sage grouse (species of concern and sensitive) is likely to occur in the area. No known leks exist

within the lease area, but the sage grouse brood rearing habitat covers the southern third of Uintah County of which the mine is a small part. The operator will mitigate the brood rearing habitat loss by using sagebrush in the reclamation seed mix, regrading to an undulating topography and leaving ponds after reclamation.

MINING AND RECLAMATION PLAN SUMMARY:

Surface Facilities: Surface facilities will include water retention ponds and administration, maintenance and warehouse facilities. The process facilities will include capsule processing equipment, a tank farm, and associated pipelines and power lines. The mining areas include soil stockpiles, temporary overburden/interburden stockpiles, capsules, access roads, and various runoff control facilities.

During Operations: Red Leaf Resources intends to expand the existing Southwest #1 mine from a small mine to a large mining operation. Soil stockpiles will be stockpiled on site, most to be directly hauled and placed on reclaimed ground. Ore and waste will be excavated, ore will be selectively placed into a bentonite amended soil (BAS)-lined capsule, and then overburden will be placed on top of the capsule. The capsule will be heated and the kerogen extracted. A second tier of capsules will constructed after the first tier has cooled. After the second tier of capsules has cooled, the surface and sides of the capsules will be regarded, soil placed and revegetated. Reclamation will be completed in phases and not left until the end of mining. Kerogen products are to be stored on site in a lined tank farm until the product is transported off site.

There will be no discharge from the water retention pond. Sediment controls will be used in remote areas. Air quality will be protected in accordance with conditions set forth by EPA. Fugitive dust will be controlled through best management practices to include speed control and treatment of roads with water.

After Operations: All processing facilities will be removed following mining. Facilities will be demolished and, as appropriate, recycled or hauled to a disposal facility. Concrete foundations left at the site will be fractured and covered with an adequate amount of suitable cover so the area can be revegetated. If requested by the property owner, SITLA, the water well(s) may be left at the site. Small roads will be left to access the site, but all other mining roads will be reclaimed. All highwalls and endwalls will be regraded to be less steep than 45 degrees. There will be no mine dumps, as all material is utilized in the capsules. The capsules sideslopes will be regraded to a 1.5H:1V slope. Five reclamation ponds will remain in a stable configuration, to benefit stock and wildlife for the post mining land use. Following regrading, disturbed areas will be covered with an average of twelve inches of soil and seeded with a mix that includes both native and introduced species adapted to the area.

SURETY:

Amount: $3,776,000.

Form: Anticipated to be cash